

WHAT IS CLAIMED IS:

1. A conductive paste used for a rear electrode of a Si solar battery, the conductive paste comprising:
 - an Al powder;
 - a glass frit;
 - 5 an organic vehicle; and
 - particles of at least one of an organic compound and carbon which are insoluble or slightly soluble in the organic vehicle.
2. A conductive paste according to Claim 1, wherein the mean particle size of the particles is in the range of about 0.5 to 10 μm .
3. A conductive paste according to Claim 2, wherein the particle content is in the range of about 1 to 10 parts by weight relative to 100 parts by weight of the Al powder.
4. A conductive paste according to Claim 3, wherein the Al powder is about 60-80 wt% of the paste and has a particle size of about 1-10 μm , the glass frit is about 1-5 wt% of the paste, and the organic vehicle is about 15-40 wt% of the paste.
5. A conductive paste according to Claim 4, wherein the organic compound is selected from the group consisting of polyolefin resin, epoxy resin, polyurethane resin, acrylic resin and terephthalic acid.
6. A conductive paste according to Claim 1, wherein the particle content is in the range of about 1 to 10 parts by weight relative to 100 parts by weight of the Al powder.
7. A conductive paste according to Claim 1, wherein the Al powder is about 60-80 wt% of the paste and has a particle size of about 1-10 μm , the glass frit is

about 1-5 wt% of the paste, and the organic vehicle is about 15-40 wt% of the paste.

5 8. A conductive paste according to Claim 1, wherein the organic compound is selected from the group consisting of polyolefin resin, epoxy resin, polyurethane resin, acrylic resin and terephthalic acid.

 9. A method for manufacturing a solar battery including a Si wafer having a p-Si layer and an n-Si layer, a light-receptive surface electrode on the n-Si layer, and
10 a rear electrode on the p-Si layer, the method comprising :

 forming the rear electrode by applying a conductive paste onto the p-Si layer of the Si wafer and firing the conductive paste, wherein the conductive paste comprises an Al powder, a glass frit, an organic vehicle and particles of at least one of an organic compound and carbon which are insoluble or slightly soluble in the organic
15 vehicle.

 10. A method for manufacturing a solar battery according to Claim 9, wherein the particles have a mean diameter in the range of about 0.5 to 10 μm .

 11. A method for manufacturing a solar battery according to Claim 10, wherein the particles constitute about 1 to 10 parts per 100 parts of aluminum powder.

 12. A method for manufacturing a solar battery according to Claim 11, wherein the Al powder is about 60-80 wt% of the paste and has a particle size of about 1-10 μm , the glass frit is about 1-5 wt% of the paste, and the organic vehicle is about 15-40 wt% of the paste.

5 13. A method for manufacturing a solar battery according to Claim 12, wherein the organic compound is selected from the group consisting of polyolefin resin, epoxy resin, polyurethane resin, acrylic resin and terephthalic acid.

14. A method for manufacturing a solar battery according to Claim 9,
10 wherein the Al powder is about 60-80 wt% of the paste and has a particle size of about
1-10 μm , the glass frit is about 1-5 wt% of the paste, and the organic vehicle is
about 15-40 wt% of the paste.

15. A method for manufacturing a solar battery according to Claim 9,
wherein the organic compound is selected from the group consisting of polyolefin
15 resin, epoxy resin, polyurethane resin, acrylic resin and terephthalic acid.

16. A solar battery comprising:
a Si wafer having a p-Si layer and an n-Si layer;
a light-receptive surface electrode on the n-Si layer, and
a rear electrode on the p-Si layer,
20 wherein the rear electrode contains pores with a mean diameter in the
range of about 0.5 to 10 μm , occupying about 1 to 20 percent of the volume of the rear
electrode.

17. A solar battery according to Claim 16, wherein the rear electrode
25 contains pores with a mean diameter in the range of about 1 to 8 μm , occupying about
3 to 15 percent of the volume of the rear electrode.

18. A solar battery according to Claim 17, wherein the rear electrode has a
thickness of about 20 to 100 μm .

19. A solar battery according to Claim 16, wherein the rear electrode has a
30 thickness of about 20 to 100 μm .